Education Practices Checklist

Use the *Education Practices Checklist* to assess your education approach and resources in advance of pilot testing your outreach initiative. The *Checklist* organizes Best Education Practices according to typical learning situations. The purpose of the checklist is to help you to identify areas of strength and to identify gaps in your technique, in order to more effectively support learners and to achieve desired learning objectives.

Recommendations are organized for:

- Web-based education
- Learning module design and group instruction
- Education for individuals
- Education for communities (communities of interest or geographical communities)
- Education for groups beyond the community
- Free-choice learning (learning that occurs when the individual selects the opportunity and resources)

Concepts outlined in the checklist are based on what we call *Essential BEPs*, developed for the Water Outreach project. Learning and best education practices identified through this effort highlight education principles related to environmental management, but are broadly applicable.

SOME TIPS TO GET YOU STARTED

For every learning situation, design the learning experience —

- To maximize the goal of the selected outreach or education effort (Monroe, Andrews & Biedenweg, 2007):
  - **Convey information** – One-way transmission of information in order to provide missing information, to increase access to "how to do it" instructions, or to build awareness about a specific topic among learners
  - **Build understanding** – A two-way transmission of information that aims to engage audiences in developing their own mental models to understand a concept. Understanding implies multiple thinking skills such as remembering, recognizing, interpreting, summarizing, and explaining (Anderson & Krathwohl, 2001).
  - **Practice and apply skills** – Learners apply or implement a skill, and organize and critique information.
  - **Create and implement sustainable actions** – Strategies that transform the learner, the issue, the educator, and perhaps the organization. These processes allow the educator and learner to work together to define both goals and/or methods of the intervention. More than activities that promote understanding or skill building, these strategies build capacity for effective citizenship in a complex world.

- To assure that learning takes place (Anderson and Krathwohl, 2001)
  - For meaningful learning to take place the student must be able to: remember, understand, apply, analyze, evaluate, and create. Tasks are broadly defined as:
    - **Knowledge** – the development of intellectual skills, such as recall of data, comprehension, application, analysis, synthesis and evaluation
    - **Attitudes** – considering the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and ways of thinking
    - **Skills** – practicing physical movement, coordination, and use of motor-skill areas

FOR WEB-BASED EDUCATION	
The learning module:	Your module
▪ Addresses a specific topic that is narrow in scope	
▪ Follows a logical hierarchy of skill and knowledge development	
▪ Moves from knowledge transmission to learner-controlled systems	
▪ Is self-directed and self-contained (students can progress through the material on their own and all materials are readily accessible as part of the course)	
▪ Has clear and concise directions on how to complete the module	
▪ Chunks the content into manageable “bites”	
▪ Provides a complete demonstration of the concept	
▪ Provides detailed and consistent feedback for practice opportunities	
▪ Makes appropriate use of a variety of media	

FOR LEARNING MODULE DESIGN and GROUP INSTRUCTION	
The learning experience:	Your module
▪ Is based on and shaped by some form of needs assessment and use of a planning model (such as the logic model)	
▪ Is designed to focus on a targeted audience and is built on an understanding of audience skills and interests	
▪ Content and delivery is determined in cooperation with the target audience and stakeholders	
▪ Is relevant to and accessible by people with diverse backgrounds and influences	
▪ Presents accurate and balanced information, incorporating many different perspectives	
▪ Incorporates methods for assessing the value of the experience	
▪ Is facilitated by quality instructors who have been trained in effective teaching methods and are supported by the program sponsor	
▪ Uses creative approaches	
▪ Values lifelong learning	

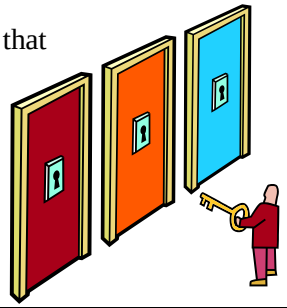
FOR THE INDIVIDUAL	
The learning experience:	Your module
▪ Has a clear purpose with tightly focused outcomes and objectives	
▪ Is learner centered, and consequently:	
o Assesses the learner in order to set appropriately high and challenging standards.	
o Relates to the individual's level of physical, intellectual, emotional, and social development.	
o Can be adapted to individual differences in learning strategies and approaches.	
o Relates to personal interests and provides for personal choice and control.	
o Encourages the learner to set meaningful learning goals and to take personal responsibility for their own learning.	
▪ Promotes active engagement and real world problem solving.	
▪ Enables the learner to link new knowledge to their existing knowledge in meaningful ways.	
▪ Builds thinking and reasoning skills – analysis, synthesis, evaluation, and problem solving – that learners can use to construct and apply their knowledge.	
▪ Presents a new behavior or skill by:	
o Demonstrating its similarity to a current behavior or skill	
o Relating the new behavior to current social practices	
o Demonstrating ease of adoption in terms of time, effort and money.	
▪ Provides a *nurturing context* for learning, with attention to: cultural or group background and influences, the physical environment, and the use of tools or practices appropriate to learner skills and abilities.	
▪ Allows a learner to interact and collaborate with others on instructional tasks.	
▪ Provides opportunities for extended effort and practice.	
▪ Builds on positive emotions, curiosity, enjoyment, and interest.	

FOR THE COMMUNITY (communities of interest or geographical communities)	
The learning experience:	Your module
▪ Evolves from work with a coalition or group	
▪ Supports a person who takes responsibility for managing or leading the process, and relies on quality group planning and facilitation techniques	
▪ Relates to long-term community vision and goals	
▪ Takes into consideration the community as a whole, including: socio-political, economic, historical, and cultural influences	
▪ Builds on locally existing skills and resources	
▪ Is flexible in response to both process and conditions	
▪ Generates and makes use of data about the local condition	
▪ Provides training to increase skills needed to accomplish goals identified by the group	
▪ Takes place close to the location where people practice a behavior of concern	
▪ Builds effectiveness through linkages to other communities, partners, and resources	
▪ Reaches people in multiple ways	
▪ Provides participants with feedback about the results of their actions	

FOR BEYOND THE COMMUNITY	
The learning experience:	Your module
▪ Builds value for education as part of policy development and implementation	
▪ Builds skills for flexibility and responsiveness to environmental issues and for facilitating community engagement	
▪ Concerning a particular topic – consolidates the learning goals for all levels of responsibility (individual, neighborhood, local government, state agency, federal agency), but adapts the teaching methods for each audience	
▪ Matches the target audience to the scale of the problem, e.g. training about a locally significant topic, vs training about how information about several related topics informs policy development	
▪ Offers avenues for participation which are competent, fair, and enhance involvement for all levels of responsibility	

FOR FREE-CHOICE LEARNING

Describes the elements that contribute to and influence the interactions and experiences that people have when engaging in activities that they select themselves; such as when visiting a museum or zoo, reading, or satisfying their curiosity in other ways. These points are also incorporated in other sections of the assessment checklist, but are repeated here for emphasis and because much individual learning about natural resources takes place outside of an organized initiative.



The learning experience:	Your module
Personal Context Factors ▪ *Motivation and expectations* – Fulfills the learner's expectations. ▪ *Interest* – Provides objects and experiences that relate to the learner's prior experiences. (Motivates the person to pay attention, persist in a task, and satisfy their curiosity.) ▪ *Prior knowledge and experience* – Makes the learning seem familiar and accessible. ▪ *Choice and control* – Gives learners a choice over what, how, when and with whom they learn, so that learners feel in control of their own learning.	
Sociocultural Context ▪ *Within group sociocultural mediation* – Recognizes that humans learn and make meaning as part of social groups. The learning experience: o Accesses group histories and communities of learners o Builds social bonds by facilitating communication about shared experiences and knowledge. ▪ *Facilitated mediation by others* – Recognizes people perceived to be knowledgeable within the culture. ▪ *Culture* – Presents learning within a familiar cultural setting.	
Physical Context ▪ *Advance preparation* – Provides advance organizers and orientation for the experience. ▪ *Setting* – Provides a comfortable setting including attention to the ambiance and feel of the place or situation. ▪ *Design* – Capitalizes on objects in the real world (using a familiar object rather than a design to draw attention or emphasize a point). ▪ *Subsequent reinforcing events and experiences* – Provides enabling contexts that occur in other places; weeks, months and often years later.	

References

Essential Best Education Practices were primarily derived from the following resources. Some references summarize major ideas from multiple authors.

Water Outreach Web site resources:
Adult Education Principles, http://wateroutreach.uwex.edu/beps/kaadulteducation.cfm
Youth Education Principles, http://wateroutreach.uwex.edu/beps/kayoutheducation.cfm
Essential Best Education Practices, http://wateroutreach.uwex.edu/beps/essential.cfm

American Distance Education Consortium. ADEC Principles for Distance Teaching and Learning. Available at http://www.adec.edu/admin/papers/distance-teaching_principles.html

American Psychological Association Board of Educational Affairs. Learner-Centered Psychological Principles, as described at http://www.apa.org/ed/lcp2/lcp14.html

Anderson, L. W., & Krathwohl, D. R. 2001. A taxonomy forlearning, teaching, and assessing. A revision of Bloom's taxonomyof educational objectives. New York: Longman.

Andrews, E., M. Smith, and G. Wise. 2002. The Community Based Environmental Education model (CBEE) documented in "A Model of Community-Based Environmental Education". Chapter 10 in *New Tools for Environmental Protection: Education, Information, and Voluntary Measures*. National Research Council Division of Behavior and Social Sciences and Education: Committee on the Committee on the Human Dimensions of Global Change, Thomas Dietz and Paul C. Stern, editors. National Academy Press.

Falk, J. and L. Dierking. 2002. Lessons without limit: how free-choice learning is transforming education. Walnut Creek, CA: AltaMira Press.

Fedler, A. 2001. Defining Best Practices in Boating, Fishing, and Stewardship Education. Report to the Recreational Boating and Fishing Foundation, Alexandria, VA. Available at www.rbff.org/educational/

Holsman, R. 2001. What Works . . . Documenting standard practices for aquatic resource education. A report to the U.S. Fish and Wildlife Service – Region 5, Federal Aid. Summarizes environmental education, outdoor education and fisheries education studies from over 130 authors.

Horton, R. L. and S. Hutchinson. 1997. The Learning Cycle (student-centered inquiry education developed from Piaget's learning theory and an extension of John Dewey's philosophy of education), as described in *Nurturing Scientific Literacy among Youth through Experientially Based Curriculum Materials*. Center for 4-H Youth Development, College of Food, Agricultural and Environmental Sciences. Columbus: The Ohio State University.

Monroe, M., E. Andrews, & K. Biedenweg. 2007. A Framework for Environmental Education Strategies. Applied Environmental Education and Communication, VOL 6, ISS 3–4.

Scott, W. and J. Fien. 1999. An evaluation of the contributions of educational programmes to conservation within the WWW network: Final Report. Unpublished report to the Worldwide fund for Nature, Gland, Switzerland.

Simmons, B. et al. 2000. Environmental education principles as described in *Guidelines for the Initial Preparation of Environmental Educators*. The North American Association for Environmental Education. Washington, D.C.

University of Tennessee, Office of Information Technology, Educational Technology Collaborative. Instructional Module components and evaluation. See example at http://edtech.tennessee.edu/%7Eset4/default.html

Planning models, such as the Logic Model, available from a variety of sources. This advice is based on a version used by the University of Wisconsin Cooperative Extension.